

AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) A method for producing photoresist structures, comprising:
exposing for which a volume of photosensitive material ~~(5)~~ is exposed at least once with by
~~means of~~ at least two light beams ~~[(1, 2)]~~, each having an angle of incidence greater than a critical
angle, which beams are superposed inside the photosensitive material ~~(5)~~, and is then subjected to a
developing process, wherein the light beams ~~[(1, 2)]~~ penetrate at least one transparent optical
element, ~~(3)~~, characterized in that and wherein the optical element ~~(3)~~ is comprises a polyhedron
including at least one of [[with]] planar or curved surfaces; and
subjecting the photosensitive material to a developing process.

2. (Currently Amended) The method for producing photoresist structures according to
claim 1, wherein the polyhedron comprises ~~characterized in that~~ a partial prism including the [[with]]
planar surfaces ~~is used for the polyhedron.~~

3. (Currently Amended) The method for producing photoresist structures according to
claim 2, wherein ~~characterized in that~~ the partial prism comprises ~~takes the form of~~ a pyramid.

4. (Currently Amended) The method for producing photoresist structures according to
claim 2, wherein ~~characterized in that~~ the partial prism comprises ~~[[is]]~~ a truncated pyramid.

5. (Currently Amended) The method for producing photoresist structures according to
claim 1, wherein the polyhedron comprises ~~characterized in that~~ a spherical segment ~~is used as~~
polyhedron.

6. (Currently Amended) The method for producing photoresist structures according to
claim 1, further including:

~~prior to exposing, depositing~~ characterized in that the volume of photosensitive material (5) is deposited directly onto one of the optical element elements (3).

7. (Currently Amended) The method for producing photoresist structures according to claim 1, further including:

~~prior to exposing, depositing~~ characterized in that ~~two optical elements are used, with the~~ volume of photosensitive material (5) ~~disposed in-between~~ two optical elements.

8. (Currently Amended) The method for producing photoresist structures according to claim ~~[[1]]~~ 6, further including:

~~prior to exposing, depositing~~ characterized in that an immersion substance (4) is disposed between ~~at least one of the optical element elements~~ (3) and the volume of photosensitive material ~~[[5]]~~.

9. (Currently Amended) The method for producing photoresist structures according to claim 1, further including:

adjusting characterized in that the light beams independently (1, 2) ~~are adjusted independent~~ of each other with respect to at least one of intensity, phase ~~[[and]]~~ or polarization.

10. (Currently Amended) The method for producing photoresist structures according to claim 1, wherein exposing includes:

exposing characterized in that the volume of photosensitive material (5) is exposed at least twice, wherein ~~and that~~ between the exposures~~[[,]]~~ the light beams (1, 2) and the volume of photosensitive material ~~[[5]]~~ are moved relative to each other.

11. (Currently Amended) The method for producing photoresist structures according to claim 1, further including:

~~characterized in that~~ covering individual regions on a ~~[[the]]~~ surface of the volume of

photosensitive material ~~(5) are covered~~ with at least one shadow mask.

12. (Currently Amended) The method for producing photoresist structures according to claim 1, wherein exposing includes:

additionally exposing ~~characterized in that~~ the volume of photosensitive material ~~(5) is~~ additionally subjected to exposure ~~by means of~~ with a single beam.

13. (Currently Amended) The method for producing photoresist structures according to claim 1, further including:

dividing ~~characterized in that~~ the volume of photosensitive material ~~(5) is divided~~ into segments.

14. (Currently Amended) The method for producing photoresist structures according to claim 1, further including:

deposing ~~characterized in that~~ the volume of photosensitive material ~~is deposited~~ on top of another volume of photosensitive material which is exposed with ~~by means of~~ at least one beam.

15. (Previously Presented) A photoresist structure produced according to a method as defined in claim 1.